

**Notice of Allowability**

Application No.

10/766,359

Examiner

Michael P. Stafira

Applicant(s)

ZHOU ET AL.

Art Unit

2877

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to filing date 1/27/2004.
2. ☒ The allowed claim(s) is/are 1-36.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 1-36 are allowed over the prior art of record.
2. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the prior art fails to disclose or make obvious an apparatus for detecting a selected material that changes an effective dielectric constant of a circular resonator having a circular resonator located adjacent to the input and output such that the electromagnetic wave is coupled in and out of the circular resonator, the resonator being capable of bonding to the selected material such that the selected material changes the power of the electromagnetic wave in the circular resonator, wherein the output waveguide receives the change in the power of the electromagnetic wave in the circular resonator, and in combination with the other recited limitations of claim 1. Claims 2-12 are allowed by the virtue of dependency on the allowed claim 1.

Regarding claim 13, the prior art fails to disclose or make obvious a method for detecting a selected material that changes an effective dielectric constant of a circular resonator having the steps of inputting an electromagnetic wave into an input waveguide; coupling the electromagnetic wave received by the input waveguide to a circular resonator; bonding the selected material to the circular resonator such that the selected material changes the power of the electromagnetic wave in the circular resonator; and receiving electromagnetic wave in the circular resonator that was changed by the bonding of the selected material to the circular resonator, and in combination with the other recited limitations of claim 13. Claims 14-24 are allowed by the virtue of dependency on the allowed claim 13.

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Regarding claim 25, the prior art fails to disclose or make obvious a method for detecting the presence of a chemical or bio-agent having the steps of inputting an electromagnetic wave into an input waveguide; coupling the electromagnetic wave received by the input waveguide to a circular resonator; bonding the chemical or bio-agent to the circular resonator such that the chemical or bio-agent changes the power of the electromagnetic wave in the circular resonator; and receiving electromagnetic wave in the circular resonator that was changed by the bonding of the chemical or bio-agent to the circular resonator, and in combination with the other recited limitations of claim 25. Claims 26-36 are allowed by the virtue of dependency on the allowed claim 25.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430. The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Michael P. Staffra  
Primary Examiner  
Art Unit 2877

April 26, 2006